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10/705,523	11/10/2003	Martin Hans	10191/2479B	4852

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EXAMINER
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LAM, DUNG LE

ART UNIT	PAPER NUMBER
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2617

DATE MAILED: 10/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/705,523	Applicant(s) HANS ET AL.	
	Examiner Dung Lam	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

The drawings 2-3 are objected to because all the labels are numerical which does not really illustrates or help the examiner understanding the invention when looking at the drawings. The examiner suggests revising the drawings to have the numerical as well as alphabetical labels. For example, from Figure 1, element "52" can be labeled as – Broadcast Channel--.

Furthermore, the bulk of invention revolves around claims 16 and 20 which describe a method of assigning a channel that has the least transmission power and dynamically changing to another better quality channel when the quality of the current connection falls below a threshold. However, none of the drawings 1-4 illustrates this concept. The examiner suggests revising the drawing to illustrate a flow chart as a summary of the claimed invention.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for

Art Unit: 2617

consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims **16, 27 and 28** are rejected under 35 U.S.C. 102(b) as being anticipated by ***Chuang et al*** (US Patent Number **5,212,831**).

4. Regarding **claim 16**, **Chuang** teaches a method of assigning transmission channels in a telecommunications network having a plurality of base stations (base units/ports 30, 40, 50, 60, Col. 10 ln 22-52) and a plurality of mobile stations (portables, 34, 36, 48, 72), the transmission channels being provided for transmitting signals between the plurality of base stations and the plurality of mobile stations, the method comprising (see Abstract): while the base stations are operating in an uncoordinated manner (C12 L59 - C13 L14, Abstract), assigning at least one of the transmission channels for transmitting signals between only one of the base stations and one of the mobile stations as a function of a channel measurement (C10 L28-31), and if a previously measured transmission power of the at least one assigned transmission channel is minimal

Art Unit: 2617

(frequency channel with the lowest received power is assigned, Abstract and Col. 11 In 66- col. 12 Ln 34); wherein a transmission power on all possible ones of the transmission channels is measured (this procedure is repeated by all the ports/base units either independently, Abstract).

5. Regarding **claim 27**, **Chuang** teaches a user station of a telecommunications network which has a plurality of base stations (base units/ports 30, 40, 50, 60, Col. 10 In 22-52) and a plurality of mobile stations (portables, 34, 36, 48, 72), transmission channels being provided for transmitting signals between the plurality of base stations and the plurality of mobile stations, comprising: a channel measurement arrangement for performing a channel measurement by measuring a transmission power of a signal received by the user station on all possible ones of the transmission (Col. 11 In 66- col. 12 Ln 34);

and a channel assignment arrangement for assigning, while channels in an uncoordinated operation of the base stations (C12 L59 -C13 L14), at least of the transmission channels for transmitting signals between the user station and only one additional user station (C10 L28-31) as a function of the channel measurement, if a previously measured transmission power of the at least one assigned transmission channel is minimal (frequency channel with the lowest received power is assigned, Abstract and Col. 11 In 66- col. 12 Ln 34).

6. Regarding **claim 28**, **Chuang** teaches a user station according to claim 27, wherein the user station includes one of a base station (base units/ports 30) and a mobile station (portables, 34).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims **24 and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over ***Chuang et al*** (US Patent Number **5,212,831**) in view of ***Toshiyuki et al.*** (US Patent No. **5,093,924**).

8. Regarding **claim 24**, **Chuang** teaches the method according to claim 16. However, **Chuang** does not teach that at least one of the base stations transmits specific information via a broadcast channel to all of the mobile stations within a reception range of the at least one of the base stations, and the broadcast channel is changed if an interference detected on the broadcast channel exceeds a pre-selected value. In an analogous art, ***Toshiyuki*** teaches the use of a broadcast channel for paging and sending control information purpose (col. 7 ln 12- col. 8 ln 36) and that the interference level of a channel does not satisfies a predetermined quality, a different channel is selected. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine **Chuang's** teaching of channel assignment and **Toshiyuki's** well known concept of using broadcast channel to send control information and selecting a channel that yields the satisfactory interference value to ensure that the system's Qos is at its maximum level.

Art Unit: 2617

9. With further regard to **claim 25, Chuang** teaches a method according to claim 24, wherein Toshiyuki teaches at least one of the transmission channels is reserved for use as the broadcast channel (col. 7 ln 12- col. 8 ln 36). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine Chuang's teaching of channel assignment and Toshiyuki's known in art concept of using broadcast channel to send control information to facilitate the communications between the mobiles and the network.

10. Claims **17-19, 26, 29-30 and 32** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chuang et al** (US Patent Number **5,212,831**) in view of **Chuang2000** (US Patent No. **6,052,594**).

11. Regarding **claim 17, Chuang** teaches a method according to claim 16 except the use of codes to spread and despread when performing channel measurement. In an analogous art, **Chuang2000** teaches the use of codes to spread at least one transmission resource into a plurality of the transmission channels, wherein the channel measurement includes a code measurement, in which a received signal for each transmission resource is despread using predefined ones of the codes to measure the transmission power in each of the transmission channels (col. 5 ln 28-44). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine Chuang's teaching of channel assignment with Chuang2000's teaching of code spreading to increase the system's capacity and reduce interference and eavesdropping (suggested by Chuang2000, col.2 ln 25-40).

Art Unit: 2617

12. With further regard to **claim 18**, Chuang in view of Chuang2000 teaches that the codes are provided for spreading at least one of a time slot and a frequency band (col. 5 In 28-44).

13. With further regard to **claim 19 and 30**, Chuang in view of Chuang2000 teaches a method according to claim 16 and 27 respectively, wherein the channel measurement is performed while a connection is being established (receive signal and simultaneously measure, col. 5 In 28-44).

14. Regarding **claim 26 and 29**, Chuang teaches a method according to claims 16 and 27 except the following steps of scrambling a new code with a transmission channel if a transmission capacity of the transmission channels established for assignment is not sufficient and assigned a new scrambled channel with the least transmission power. In an analogous art, **Chuang2000** teaches the concept of using CDMA technology of scrambling channels with codes to increase capacity (col.2 In 25-40), and the steps of (A) scrambling at least one of the transmission channels with a new scrambling code (Col. 6 In. 2-12, Col. 5 In. 28-44). Furthermore, **Chuang** teaches the step of (B) assigning the at least one transmission channel for transmitting signals between one of the base stations and one of the mobile stations as a function of a channel measurement, wherein transmission power of all channels are measured and the one with the minimum power is assigned (**Chuang** Col. 5 In. 28-44). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to apply Chuang2000's teaching of code scrambling to Chuang's teaching of channel



Art Unit: 2617

measurement and assignment to increase the system's capacity and decrease the interference level.

15. Regarding **claim 32**, **Chuang** teaches the user station according to claim 27, except the steps of assigning a new scrambling code with a transmission based on the channel measurement assigned a new scrambled channel with the least transmission power.

In an analogous art, **Chuang2000** teaches the concept of using CDMA technology of scrambling channels with codes to increase capacity (col.2 ln 25-40), and the steps of (A) scrambling at least one of the transmission channels with a new scrambling code (Col. 6 ln. 2-12, Col. 5 ln. 28-44). Furthermore, **Chuang** teaches the step of (B) assigning the at least one transmission channel for transmitting signals between one of the base stations and one of the mobile stations as a function of a channel measurement, wherein transmission power of all channels are measured and the one with the minimum power is assigned (**Chuang** Col. 5 ln. 28-44). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to apply Chuang2000's teaching of code scrambling to Chuang's teaching of channel measurement and assignment to increase the system's capacity and decrease the interference level.

16. Claim **20 and 31** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chuang et al** (US Patent Number **5,212,831**) in view of **H'mimy** (US Patent No. **6,442,152**).

17. Regarding **claim 20**, **Chuang** teaches the method according to claim 16. However, Chuang does not teach that a new channel is selected if the connection quality falls below a level. In an analogous art, **H'mimy** teaches that the channel measurement is

Art Unit: 2617

performed during an existing connection between one of the base stations and one of the mobile stations, and wherein a connection quality of the existing connection is measured in parallel, and, if the connection quality falls below a preselected value, a channel change is performed and at least one new transmission channel is assigned as a function of a channel measurement of the existing connection (Col. 3, ln 23-34, col. 6 ln 6-10). Therefore it would have been obvious for one of ordinary skill in the art at the time of the invention to combine Chuang's teaching of channel assignment and H'mimmy's teaching of reassigning a channel when the quality falls below a pre-selected value because this channel reassignment would prevent the system's quality of service from degrading to an unacceptable level.

18. Regarding **claim 31**, **Chuang** teaches the user station according to claim 27. However, Chuang does not teach that a new channel is selected if the connection quality falls below a level. In an analogous art, **H'mimy** teaches that the connection quality arrangement for measuring in parallel a connection quality of an existing connection between the user station and the additional user station; wherein the channel assignment arrangement performs a channel change if the connection quality falls below a preselected value, so that at least one new transmission channel is assigned as a function of a channel measurement of the existing connection, and the channel measurement arrangement performs the channel measurement during the existing connection. (Col. 3, ln 23-34, col. 6 ln 6-10). Therefore it would have been obvious for one of ordinary skill in the art at the time of the invention to combine Chuang's teaching of channel assignment and H'mimmy's teaching of reassigning a

Art Unit: 2617

channel when the quality falls below a pre-selected value because this channel reassignment would prevent the system's quality of service from degrading to an unacceptable level.

19. Claim **21** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Chuang et al** (US Patent Number **5,212,831**) in view of **Wejke et al.** (US Patent No. **5,175,867**).

20. Regarding **claim 21**, **Chuang** teaches the method according to claim 16.

However, **Chuang** does not teach that a channel measurement for an assignment of at least one transmission channel in an uplink transmission direction from one of the mobile stations to one of the base stations is performed by a corresponding one of the base stations, and a channel measurement for an assignment of at least one transmission channel in a downlink transmission direction from one of the base stations to one of the mobile stations is performed by a corresponding one of the mobile stations. In an analogous art, **Wejke** teaches a base station measuring a signal strength of the uplink time slot assigned to that mobile station. Therefore, it would have been obvious for one of ordinary skill in the art to combine **Chuang's** teaching of channel assignment and **Wejke's** teaching of measuring the uplink by the base station before assigning the channel to maximize the system's quality of service.

21. Claim **22** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Chuang et. al** (US Patent Number **5,212,831**) in view of **Mizoguchi** (US Pub No. **2001/004687**).

Art Unit: 2617

22. Regarding **claim 22**, **Chuang** teaches the method according to claim 16.

However, Chuang does not explicitly teach that the step of assigning at least one of the transmission channels includes assigning at least one of the transmission channels in at least an uplink transmission direction from one of the mobile stations to one of the base stations, the assigning being performed by a corresponding one of the base stations.

In an analogous art, **Mizoguchi** teaches a base station assigning an uplink channel.

Therefore, it would have been obvious for one of ordinary skill in the art to combine Chuang's teaching of channel assignment and Mizoguchi's teaching of assigning an uplink because the base station knows its current resource status for uplink transmission and thus allows a more suitable uplink channel allocation.

23. Claims **23** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chuang et al** (US Patent Number **5,212,831**) in view of **Lan** (US Publication No. **2004/0214582**).

**24.** Regarding **claim 23**, **Chuang** teaches the method according to claim 16. However, Chuang does not teach that the step of assigning at least one of the transmission channels includes assigning at least one of the transmission channels in at least a downlink transmission direction from one of the base stations to one of the mobile stations, the assigning being performed by a corresponding one of the mobile stations. In an analogous art, **Lan** teaches a mobile station selecting a downlink timeslot (para. 202). Therefore, it would have been obvious for one of ordinary skill in the art to combine. Chuang's teaching of channel assignment and Lan's teaching of a mobile station to select the downlink channel because the mobile station knows its current

resource status for downlink transmission and thus allows a more suitable downlink channel allocation.

### ***Response to Arguments***

Applicant's arguments with respect to claims 16-32 have been considered but are moot in view of the new ground(s) of rejection.

The examiner notes the phrase "the base stations are operating uncoordinated manner" is very broad and still broadly reads on Chuangl's disclosure of the channel searching/scanning by each radio base stations are performed interdependently/asynchronously as addressed in the independent claims above (C12 L59 -C13 L14, Abstract).

Applicant stated that "uncoordinated" operation means "the base stations are not connected by a superordinate system". In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "uncoordinated" operation means the base stations are not connected by a superordinate system) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Art Unit: 2617

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Lam whose telephone number is (571) 272-6497. The examiner can normally be reached on M - F 9 - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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